Department of Energy

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POWER BUSINESS LINE

November 5, 2002

In reply refer to: PGF-6

Mr. John Iani
Regional Administrator, Region 10
Environmental Protection Agency
1200 Sixth Avenue
Seattle, WA 98101

Subject: Preliminary Draft Columbia/Snake Rivers Mainstem Temperature Total Maximum Daily Loads (TMDL)

Dear Mr. Iani:

The Bonneville Power Administration (BPA) reviewed the preliminary draft Columbia/Snake Rivers Temperature TMDL presented by Environmental Protection Agency (EPA) to the Federal Action Agencies on September 4, 2002. We appreciate that EPA, Idaho, Oregon and Washington have signed a Memorandum of Agreement to develop TMDLs on a short timeframe, and recognize that much energy has been devoted to this effort. However, Bonneville has six serious concerns about the preliminary draft TMDL:

1. EPA fails to consider all of the Columbia and Snake Rivers' uses and values despite the Clean Water Act's requirement to do so.

2. EPA's chosen methodology actually *precludes* the statutorily mandated consideration of uses and values like recreation, agriculture, industry, and navigation, because it simulates the mainstem temperature conditions in the absence of human activity in the mainstems.

3. EPA unreasonably assigns almost the entire burden of attaining the temperature standard at Columbia River Mile 4 to the fifteen mainstem dams, despite the fact that sources outside the TMDL boundary contribute heat to the river system.

4. EPA ignores, without providing justification, the Federal Advisory Committee's recommendation that large existing dams be given a background allocation in the TMDL because they are impossible or virtually impossible to remove.

5. EPA fails to address questions about the scientific integrity and sufficiency of the data underlying the TMDL's assumptions and conclusions.

6. EPA's methods will result in a TMDL that will encourage protracted litigation.

EPA's positions relative to the above concerns seem inconsistent with our understanding of Deputy Regional Administrator Ron Kreizenbeck's views, expressed at the September 20 Federal executive meeting, that it is reasonable to consider feasibility of modifications of dam operations to achieve improvements to the mainstem's temperature regime *during the TMDL process* and that impacts stemming from the existence of the dams themselves - their construction, and the operational limitations necessary to achieve their purposes - should not be subject to the TMDL process. The fifteen mainstem dams provide significant regional benefits. Yet the preliminary draft TMDL does not assign any portion of the temperature allocations to the dams' construction, and utterly fails to recognize that the dams' ability to achieve temperature targets is severely limited by their operational constraints. Instead, the preliminary draft TMDL lumps construction and operations impacts together, and their combined "impacts" are superimposed upon a non-existent, "virtual" free-flowing river.

Our first specific concern about the preliminary draft TMDL is that EPA's failure to consider all relevant uses and values will result in adverse economic and social impacts within the region if this TMDL is enacted as proposed. Section 303(c)(2)(A) of the Clean Water Act explicitly requires water quality standards to take into consideration the waterbody's use and value not only for fish and wildlife, but also for public water supplies, recreation, agriculture, industry, navigation, and other purposes. There is no evidence that the states, when establishing their water quality standards, or EPA, when drafting the TMDL, considered all of these uses and values. The resulting extremely low temperature targets, if they are achievable at all, would necessitate operational and structural changes of such magnitude that the dams' capability to serve their Congressionally mandated purposes - including hydropower generation, irrigation supply, flood control, navigation, and recreation - would be jeopardized, to the detriment of the region's citizens and economy.

Congress, which was fully aware of the Federal dams when it wrote the Clean Water Act, could not have implicitly intended for the Act to prevent the dams from serving their explicit statutory purposes. This assertion is supported by (1) the fact that Congress has continually funded the dams before, during, and after the Clean Water Act's 1972 reauthorization, and (2) § 303(c)(2)(A) of the Act, which mandates consideration of a water body's use and value for recreation, agriculture, industry, navigation, and other purposes in the establishment of water quality standards. By funding Federal dams while simultaneously enacting the Clean Water Act, Congress clearly has intended for clean water to coexist with recreation, agriculture, industry, and navigation. Unfortunately there may be no management practice that both achieves full compliance with the proposed standards and allows the dams to serve those purposes.

Congress demonstrated similar intent to evenly consider multiple purposes when it discussed planning future U.S Army Corps of Engineers and U.S. Bureau of Reclamation dams in § 102 of the Clean Water Act. Section 102 requires instream flow for water quality purposes to be

considered "in a manner which will insure that all project purposes *share equitably*[1] in the benefits of multiple-purpose construction."

EPA is establishing this TMDL pursuant to § 303(d)(2), which the agency interprets as granting it implicit authority to do so at the request of states that have failed to write their own TMDLs. In this situation, where it is acting under unproven implicit authority, it is imprudent for EPA to potentially frustrate Congress' explicit intent that the dams serve specific purposes without a more carefully crafted discussion of how dam operations and purposes will be treated in the process.

Our second concern is that EPA's methodology for simulating temperature conditions in the mainstem is inconsistent with the Clean Water Act because it models the mainstem absent any human activity, which precludes consideration of the § 303(c)(2)(A) factors. EPA has used a model to simulate what the water temperature would be in the river in the absence of any human-based pollution or alternations, despite the fact that § 303(c)(2)(A) explicitly requires water quality standards to reflect consideration of certain human activities.

EPA's choice of this methodology creates an untenable situation. The proposed target temperatures place the entire regulatory framework in question because the Federal agencies operating the dams are required to operate them for multiple project purposes that may conflict with attainment measures required to reach those targets; in essence, EPA seeks to establish a regime under which the dam operators must achieve standards that are incompatible with their fundamental operational requirements. It will also entail extensive study and effort, which ultimately (depending upon Congressional discretion) may serve no meaningful purpose.

Our third concern is that the EPA's allocation scheme disregards the basin-wide nature of the temperature problem. EPA assigns virtually the entire burden of attaining the temperature standard at Columbia River Mile 4 to the fifteen mainstem dams and essentially ignores the temperature additions from sources outside the TMDL boundary. These non-mainstem sources, which include the Columbia upstream of the Canadian border, the Snake upstream of its confluence with the Salmon, and *all* tributaries, are, in effect, accorded "natural background" status. At the same time, the targets for the mainstem are based on the most stringent temperature standards EPA could identify. The result is that the mainstem dams are allowed to exceed their site potential temperatures by a mere $1/100^{th}$ of a degree centigrade. For all practical purposes the dams and associated reservoirs are allowed to add no heat.

EPA's approach is flawed because it fails to account equitably for heat added from all sources basin-wide, and unfair because the burden is almost entirely on the fifteen mainstem dams to

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[1] Clean Water Act § 102 addresses planning for future reservoir construction and storage projects, and states that the value of reservoir storage for water quality "shall be taken into account in determining the economic value of the entire [reservoir] project of which it is a part, and costs shall be allocated to the purpose of regulation of stream flow in a manner which will insure that all project purposes, share equitably in the benefits of multiple-purpose construction." 33 U.S.C. § 1232(b)(4).

remedy the problem. BPA recommends that EPA recalculate the site potential temperatures with the dams in place, or at minimum, recalculate the site potential temperatures with *all* the basin's heat sources removed so that the water quality standard increments can be assigned more equitably.

Our fourth concern is that EPA has not explained why it rejected the Federal Advisory Committee's recommendation that large existing dams be given a background allocation in the TMDL process because they are impossible, or virtually impossible, to remove.[2] BPA strongly supports this recommendation because it allows the vital purposes of the dams to be preserved, and minimizes the apparent conflict between Congress' two mandates - to build and operate dams, and to achieve water quality standards. A background allocation to dams recognizes Congress' awareness that these dams existed and did not contemplate their removal by passing the Clean Water Act, and at the same time allows Federal dam operators to implement any discretionary operational actions that could improve temperature conditions.

Our fifth concern is that EPA has failed to respond to questions about its methodology. During the public process for the temperature TMDL, many issues have been raised concerning the scientific integrity and sufficiency of the data underlying the TMDL's assumptions and conclusions. The BPA funded Montgomery, Watson, and Harza/GEI to review the EPA model used in the temperature TMDL, and the report was made available to EPA, yet none of the technical concerns identified in the report were addressed or corrected prior to the issuing of the preliminary draft TMDL because of expressed time constraints. While we recognize the need for expediency, we also believe that an undertaking of this importance demands thorough examination of all aspects of the problem.

Our sixth concern is that EPA is inviting potential litigants to engage the U.S. in protracted litigation by proposing unrealistic temperature targets for the dams, by failing to discuss the difficulties the dam operators are facing, and by failing to describe how the dams' multiple purposes will be acknowledged within the regulatory framework. BPA sees unprecedented implications nationally for all streams with large- or medium-sized dams or clusters of dams. These implications perhaps are best addressed on an environmental policy level within the context of conflicting legislation and program missions.

In summary, there is considerable technical and policy development that should be undertaken before the Draft Columbia/Snake Rivers Temperature TMDL is released for formal public comment. The public draft should include (1) an approach that considers the thermal effects of the existence of dams as part of the background load, (2) a strategy for a reasoned, well considered approach to the TMDL recognizing the multiple purposes the dams serve, (3) a reasonable array of alternative approaches for establishing target temperatures, and (4) a load allocation to the Columbia River basin and Snake River basin upstream of the TMDL boundaries.

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[2] *Report of the Federal Advisory Committee on the Total Maximum Daily Load (TMDL) Program* 58, EPA 100-R-98-006, July 1998.

We look forward to continued cooperation in efforts to improve water quality conditions in the mainstem Columbia River. If you have any questions about these comments, you may contact Stephen Sander of my staff at (503) 230-4724.

Sincerely,

Roy B. Fox
Manager, Federal Hydro Projects

cc:
Brigadier General David A. Fastabend, U.S. Army Corps of Engineers, North Pacific Region
Mr. Tom Fitzsimmons, Washington Department of Ecology
Ms. Stephanie Hallock, Oregon Department of Environmental Quality
Mr. J. William McDonald, U.S. Bureau of Reclamation